

## **Coral Reef Vocabulary**

### **Coral Reef**

Coral reefs are the biggest living structures on Earth! The astronauts in space can even see the Great Barrier Reef off of Australia. However, the animals that build the reefs, the coral polyps, are actually very small – usually no bigger than your little fingernail.

### **Coral Polyps**

Coral polyps are very simple animals. A coral polyp is basically just a stomach with tentacles around its mouth. The tentacles have stinging cells that the coral polyp uses to capture its favorite food, plankton. Each coral polyp makes a stony shell that it lives in, but all of the coral polyps are joined together on the surface of the coral rock, making what is called a colony.

### **Florida Keys Reef**

Coral colonies have been living on Earth for millions of years. The reef that created the islands of the Florida Keys was made by coral reefs that were underwater when sea level was 25 feet higher than it is today.

About 100,000 years ago the Earth was in an ice age – the polar ice caps grew bigger, and the sea water level dropped about 300 feet below what it is today! Then, about 15,000 years ago, the polar ice caps began to melt and the sea level began to rise. The islands of the Florida Keys were formed as water surrounded these high points off the coast of South Florida. Once again, a reef began to grow underwater. That living reef, the Florida Keys Reef, is about 4,000 years old.

### **Zooxanthellae**

Corals need clean, clear water to live in because there is a special kind of plant, called an algae, that lives inside them. This special algae is called zooxanthellae, which comes from the Greek words for animal and golden. The zooxanthellae give the coral polyps their color. In the Florida Keys, that color is usually gold or green, but in other parts of the world the zooxanthellae may also be other colors, like purple or pink!

### **Symbiosis**

The zooxanthellae are very important to the coral polyps, and the polyps are important to the zooxanthellae. The polyps give the zooxanthellae a safe place to live and food to eat. The zooxanthellae give the coral polyps Oxygen and help them make their stony shell using minerals from the sea. This kind of relationship is called Symbiosis, because both the coral polyp and the zooxanthellae get something that they need to live, and they do not harm each other.

### **Clean, Clear Water**

Because the zooxanthellae plants (algae) they need sunlight for photosynthesis. That is why the corals need to have clean, clear water. If the water is too cloudy, the sunlight can't get to the zooxanthellae and the coral polyps can't get the Oxygen they need to live.

## **Ecosystem**

Ecosystem is what we call a special area where the living and non-living things all work together. An ecosystem can be as big as the whole Earth, or as small as a drop of water. Coral reefs are the oldest ecosystem in the world! The non-living parts of the coral reef are the sunlight, which is the source of energy, as well as the rocks and sand and of course, the sea water. In the Florida Keys, the three main parts of the ecosystem are the coral reef, the seagrass, and the mangrove trees. This coral reef ecosystem provides shelter and food for many, many living things.

## **Coral Reef Ecosystem Residents**

All of the plants and animals in the coral reef ecosystem have very important parts to play. For example, did you know that a big parrotfish could make about a pick-up truckload of sand every year?

## **Ecology and Economy**

The coral reef ecosystem is very important in the Florida Keys because it helps to support our economy by giving people jobs in fishing, shrimping, tourism, and all of the jobs that support other people, like